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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,736	09/27/2000	William J. Rooney	POU920000103US1	7694

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KONRAD RAYNES & VICTOR, LLP
315 S. BEVERLY DRIVE
210
BEVERLY HILLS, CA 90212

EXAMINER

SORRELL, ERON J

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 03/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/670,736

Applicant(s)

ROONEY ET AL.

Examiner

Eron J Sorrell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 16 and 24 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7, 9, 10, 12-15, 17, 18 and 20-23 is/are rejected.
- 7) ☒ Claim(s) 3, 11, 19 and 25-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,2,4,5,9,10,12,13,17,18,20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelley et al. (U.S. Patent No. 6,542,469 hereinafter "Kelley").

3. Referring to method claim 1, system claim 9, and article of manufacture claim 17, Kelley teaches a method for selecting one of multiple proposed paths to a device comprising:

for each proposed path, determining a number of components the proposed path shares with existing paths to the, wherein the components comprise points of failure such that if one component fails then the path including the component fails (see lines 52-65 of column 2); and

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using the determined number of shared components for each proposed path to select one proposed path (see lines 52-65 of column 2).

4. Referring to claim method claim 2, system claim 10, and article of manufacture claim 18, Kelley teaches using the determined number of shared components to select one proposed path comprises selecting the proposed path having a least number of shared components with existing paths (see lines 52-65 of column 2), and wherein the selected proposed path is selected to provide an additional path to the device (see lines 66 and 67 of column 1).

5. Referring to method claim 4, system claim 12, and article of manufacture claim 20, Kelley teaches each path includes an adapter in a computer and an interface port in the device (see lines 20-26 of column 4; Note that the nodes are processors for transferring or processing data and are connected to each other with the links and the adapter in the computer and interface port for the device simply allow the components to be connected), wherein determining the number of components the proposed paths has in common with existing paths further comprises determining a number of components the adapter in the

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proposed path shares with the adapters of existing paths to the device and determining the number of components the proposed path shares with the interface ports with existing paths (see lines 52-65 of column 2).

6. Referring to method claim 5, system claim 13, and article of manufacture claim 21, Kelley teaches each path includes a source port and destination port on a switch, wherein the adapter for a path connects to the source port of the switch and wherein the interface port for the path connects to the destination port of the switch (see lines 20-26 of column 4 and figure 1), wherein determining the number of components the proposed path has in common with existing paths further comprises determining components on the switch the proposed path has in common with existing paths (see lines 52-65 of column 2).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 6,14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley in view of Spagnolo et al. (U.S. Patent No. 6,526,024 hereinafter "Spagnolo").

9. Referring to method claim 6, system claim 14, and article of manufacture 22, Kelley fails to disclose determining whether the source port and destination port of the proposed path is in a port card including the source or destination port of any existing paths, however Kelley does disclose the paths comprising switches.

Spagnolo discloses a switch with port cards capable of sending and receiving data packet fragments (see lines 32-52 of column 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to further modify the system and method of Shank such that the switches comprise port cards and determining whether the source port and destination port of the proposed path is in a port card including the source or destination port of any existing paths. One of ordinary skill in the art at the time of the applicant's invention would have been motivated to make such modification in

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order to send and receive fragments of packets increasing the flexibility of system.

10. Claims 7,15, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley in view of Burton et al. (U.S. Patent No. 6,393,535).

11. Referring to method claim 7, system claim 15, and article of manufacture claim 23, Kelley fails to teach the device comprises a control unit providing access to a storage space, and wherein each proposed path connects one adapter in the computer with one interface port in the control unit, however Kelley does suggest the disclosed system and method can be used in any network (see lines 23-26 of column 4).

Burton teaches, in an analogous system, a device comprising a control unit providing access to a storage space (see item labeled 12 in figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Kelley with the teachings of Burton such that the device comprises a control unit providing access to a storage space, and wherein each proposed path connects one adapter in the computer with one interface port in the control unit. One

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of ordinary skill in the art would have been motivated to make such modification in order to use the system in a storage area network.

Allowable Subject Matter

12. Claims 8,16, and 24 are allowed.

13. Claims 3,11,19, and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed 12/09/03 have been fully considered but they are not persuasive. The applicant argues:

1) Kelley fails to teach or disclose the claim requirement that the components comprise points of failure such that is one component fails then the paths including the component fails (see lines 3-5 of page 11 of applicant's arguments filed 12/9/03);

2) Kelley teaches away from the claim requirement because the cited Kelley discusses determining at least two paths that are maximally disjoint, whereas the claims require selecting one of multiple proposed paths to a device, where the one path is

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selected using the determined number of shared components for each proposed path (see lines 14-18 of page 11 of applicant's arguments filed 12/9/03);

3) Kelley fails to teach or disclose the claim requirements that each path includes an adapter in a computer and an interface port in the device;

4) Kelley fails to teach or disclose the requirement that each path further includes a source port and a destination port on a switch, wherein the adapter for a path connects the source port of the switch and wherein the interface port for the path connects to a destination port of the switch, wherein determining the number of components the proposed path has in common with existing paths further comprises determining components on the switch the proposed path has in common with existing paths.

15. **As per argument 1**, the Examiner disagrees. At column 2, lines 52-65, Kelley teaches, "By pre-computing a maximally disjoint pair of paths, the probability that an **inoperable or poor quality link or node** is in both paths is minimized. The probability that the **inoperable link or node blocks transfer of data** is minimized (emphasis added). This citation clearly teaches that the nodes (components) can be/become inoperable

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(comprise points of failure) and block the transfer of data. Since the data would be blocked at that node, the path as a whole fails.

16. **As per argument 2**, the Examiner disagrees. The Examiner agrees that Kelley does indeed teach determining at least two paths that are maximally disjoint, however **this does not teach away from the claimed invention** (emphasis added). There is no limitation in the claim that requires **only one path** be selected (emphasis added). Therefore, Kelley teaching at least two paths being selected teaches the limitation as claimed by the applicant.

17. **As per argument 3**, the Examiner disagrees. At column 4, lines 20-24, Kelley teaches the nodes on the path can be switches for transferring data or processors for processing data. At lines 6-23 of page 2 of the specification of the instant application, adapters and ports are defined simply as means for connecting cables to the devices. Since Kelley teaches links are communication connections (cables) and are connected to the processors and switches in the path. Therefore, the nodes on the path must have these adapters and

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interface ports for the communication links to be coupled to them.

18. **As per argument 4**, the Examiner disagrees. Kelley clearly teaches the paths include switches (see lines 20-24 of column 4). It is the position of the Examiner that these types of switches disclosed by Kelley inherently have source ports and destination ports. Kelley also teaches that all nodes (components) on the path are considered when computing the maximally disjoint path pairs (see line 44 of column 4 to line 24 of column 5). Lastly, see discussion of argument 3 above for the connectivity concerning adapters and port interfaces.

Conclusion

19. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EJS
February 29, 2004

A handwritten signature in black ink, consisting of a large, stylized 'R' followed by a series of loops and a long horizontal stroke.

**REHANA PERVEEN
PRIMARY EXAMINER**